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## New Professor Studies Diet for Altitude Flyers

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# New Professor

## Studies Diet For Altitude Flyers

by Marjorie Clampitt

**D**R. KENNETH PENROD, new assistant of physiology at Iowa State, has been carrying on research and practical tests for the past four years to help increase the safety and the efficiency of the many pilots, gunners, navigators and engineers of our flying air force. As a lieutenant in the army air forces, he worked at the Aero Medical Research laboratory, Wright Field, Dayton, Ohio.

Among rescue equipment in addition to the ever-present army K ration is a special kit of food, containing rice, bacon and tea. Even though this might not sound like a sumptuous meal it adds variety to the K ration and also has the advantage of a small carrying bulk. "Tea," Dr. Penrod says, "is a great pickup after a long cold jaunt."

He also worked on nutritional problems from the standpoint of high altitude flying. Foods which are particularly gas-forming are dangerous to a flyer. At high altitudes gases expand and in the body this causes severe cramps. Breakfast was the meal that American flyers had before they started on bombing missions over Europe. They were served bacon—not crisp—but fatty, and eggs.

The fat diet remains in the stomach longer, thus delaying hunger somewhat. The flyers forced the meal down even though they might not feel like eating,

since they wouldn't see another meal for possibly 12 to 15 hours.

In the winter of 1942, Dr. Penrod went to Alaska and the Aleutians to assist in developing methods of rescue and new types of emergency equipment for army fliers to use in the event of being forced down in a wilderness area. To actually experience this, he and his associates made a simulated rescue by walking 120 miles across Arctic wilderness in Alaska. They found by experiment the value of certain rescue equipment and were able to standardize techniques and procedures. The lessons learned on this voluntary journey were later responsible for the safety of flyers forced down in the Arctic.

Dr. Penrod also conducted research on the physiology of fatigue as relating to the efficiency of flying personnel. In the air forces fatigue results from the sitting in cramped spaces for a long period of time, rather than from exercise. In a P-51 fighter the pilot may sit in his cramped position as long as eight hours. This physical fatigue combined with the anxiety reactions from combat is termed "flyer fatigue." In the spring of 1944 a pneumatic suit was developed for fighter pilots and Dr. Penrod acted as project officer for the Eighth Air Force in England in trial and modification of these suits.

## Dolls Model

### Famous Costumes

**Q**UEEN ELIZABETH, Marie Antoinette, Anne of Brittany and Madame Fontange are on constant parade in their finest gowns in the Home Economics Building.

Doll figurines of these famous women repose elegantly in high, glassed-in display cases along the hall on main floor. The gowns they are wearing were created 18 years ago by students of History of Costume under the direction of Mrs. Lulu Brandt.

The costumes are typical of the historical periods they represent. The students chose colors and materials matching as exactly as possible those used in the original costumes. These replicas have now become fragile and cannot be moved, lest the materials fall apart when touched.

About 2 feet tall, these alert and graceful dolls were purchased in Chicago by the Department of Textiles and Clothing.

In addition to those on display, there are about 20 more famous ladies, including Martha Washington, carefully packed away in boxes.

—Irene Meyer

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